



MINISTERIO DE INDUSTRIA
JUNTA DE ENERGIA NUCLEAR

Madrid, 31 de Mayo I. 979

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Office of Technology Impacts
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Dear Dr. Wachholz:

I am sending to you, as soon as possible after your telephone call, our commentaries to the "Proposal for accelerated Efforts related to Project Indalo".

I think this is what you need. From the point of view of the funds I think is included in the Proposal everything we discussed. But it will be necessary to increase the funds for the FY 1979 if this year it is not going to be considered as the first year of the expanded project.

As you know 50.000 dollars for 1979 it is too small.

Sincerely yours

-Emilio Iranzo -

Jefe de la División de Protección y Medicina

US DOE ARCHIVES	
RG	326 U.S. ATOMIC ENERGY COMMISSION
Collection	1320
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Emilio Iranzo
P. 10/45



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COMMENTARIES TO THE PROPOSAL FOR ACCELERATED EFFORTS
RELATED TO PROJECT INDALO.

1. - Introduction -- No comments

2. - Administrative Summary.

No comments

SUMMARY OF PAST, PRESENT AND PROPOSED STUDIES.

A. Past and Present Studies.

1. Human

Must be substituted " 1966 " by "1967".

It must be added : Plutonium-239 urine analysis of these persons have given positive results in some cases.

1975-76. - The number of residents must be included, instead of the "unknown

In 1975, 50 resident were lung counted and 128 in 1976.

All the urine analysis results for 1975 were negative.

The urine analysis of cheked persons in 1976 were negative except in three persons.

DOE ARCHIVES

1978. - In 1978, 130 persons were chest counted , 70 out of them were before October 1 and 60 after October 1.

Future: Correct.



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2. Air.

1966- 69 Correct.

1969-78. From october 1969, two air sampling stations in operation --
instead of three.

Future : Correct.

3. Vegetation.

1969- 78 - Correct.

Future - Correct.

4. Soil.

1966-69: 7 Sampling grids, 9 locations per grid, 5 soil depths per location
replicates of all samples, analysis for total alpha in samples of
1966, 1967 and 1969.

DOE ARCHIVES

1969-77. - It must be substituted " 5 sampling grids" by "7 sampling grids".

It is not correct "only the top 1 cm of the soil is sampled", because
what we call "surface samples" are taken by sweeping a surface area
of 50 x 50 cm. in each of the 9 locations per grid.

Future - Correct.



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B . - Proposed New Studies.

Ground area survey. - Correct

Animal sampling program . - Correct

Particle -size determination. - Correct.

Review of program. - Correct

In the new studies, I think it could be included the measurement of americium-241 and uranium-235 in all the soil and vegetation sample we have from the sampling program which started in 1966.

C. - Financial Support.

In financial suport it is not include the cost of revision in Madrid all the people living in the area which has not been revised so far for chest counting, urine analysis and medical examination.

Pag. 8 - Correct.

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Pag. 10 . - I can not relate Appendix 5 with Camp Wilson, because only during the first two or three days was established at the bed river. Most of the time was out of the map in Appendix 5. It could have some relation with Appendix 4.

Pag. 10. - It is Appendix 6 instead of Appendix 7.



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4. - HALL - OTERO AGREEMENT

No comment.

5. - DOE CONTRACTOR REPORTS AND RECOMMENDATIONS.

No comment.

5.5. - From our calculations, the minimum detectable activity (MDA) in lung counter is 21.8 nanocuries plutonium-239 and 0.12 nanocuries for americium-241.

6. - RECOMMENDATIONS FOR AN EXPANDED PROGRAM INDALO.

6.1.1. - People.

Page 17 - The sentence "soon after the accident in 1966" must be substituted by "in 1967"

6.1.2. - Air

DOE ARCHIVES

Page 21. - The second paragraph must be corrected as follows:

"Unfortunately, in october 1969 two of the original for air sampling stations (nearest Impact. Point 2 and the one in area 3) was discontinued and since then only two have been available for use".

Dr. Langham information is not correct in relation with air sampling station of area 3.

Last sentence of the paragraph must be:

"All two stations were renovated in 1974"



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6.1.3. - VEGETATION

The sentence "Six sites were originally" must be substituted by "Seven sites were"

The sentence "One study plot was established in area 5", must be substituted by "Two study plot were established in area 5, and a control plot designated 5-3 B was established in the area just beyond the zero line of 1966."

In the sentence "Vegetation samples, both wild and cultivated, were collected once each year at the same time the soil samples were obtained", must be eliminated "at the same time the soil samples were obtained".

DOE ARCHIVES

6.1.4. - SOIL

In page 23, line 5, must be substituted "five" by "six"

In page 23, line 16, must be eliminated "and 1977".

6.2. - NEW ACTIVITIES

6.2.1. - Ground Area Survey

Correct.

6.2.2. - Animal sampling program

Correct.

6.2.3. - Particle size determination

Correct.



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7. - RESOURCES REQUIRED.

My comment in relation with this is the following:

"Maintenance cost per year is about 10% of the equipment cost. So the maintenance cost for this new equipment will be about \$17.500 per year. It would be interesting to consider the specification about it. It must be considered also the cost I speak about in C-Financial Support.

7.1. - Operating Cost.

No comments.

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7.2. - Equipment Funds.

It seems to me too small the estimated cost for Air samplers.

7.3. - Program liaison

No comment.

7.4. - Agency

No comment

7.5. - Government

No comment

7.6. - Long-Term Consideration

No comment.